EXHIBIT I

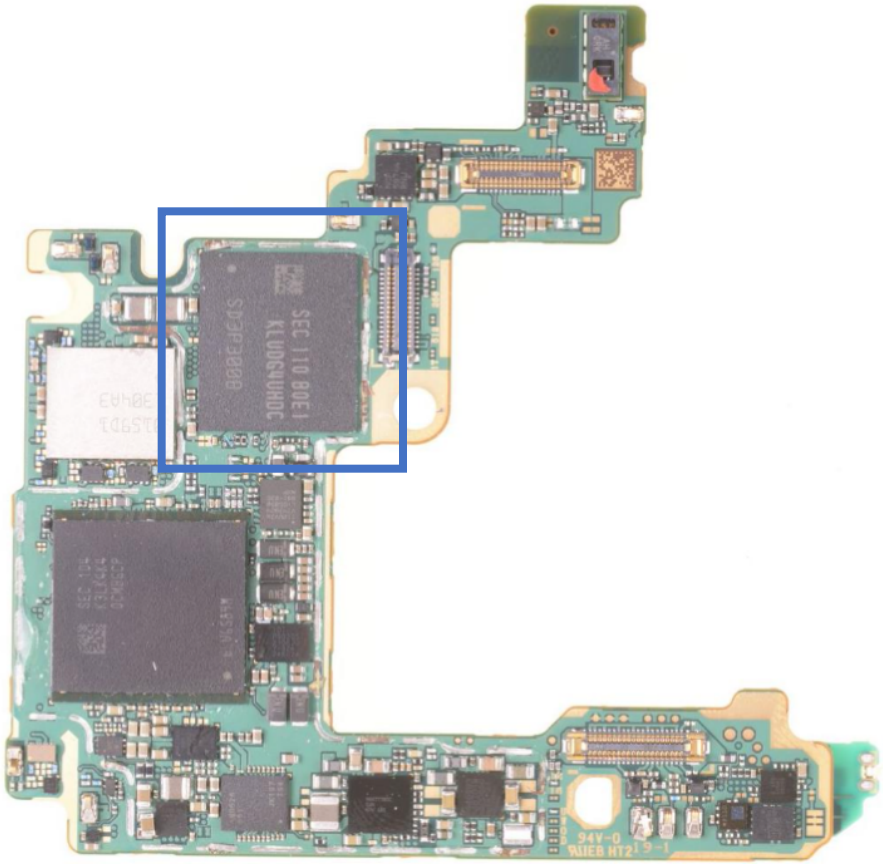
U.S. Patent No. 6,724,241 ("'241 Patent")

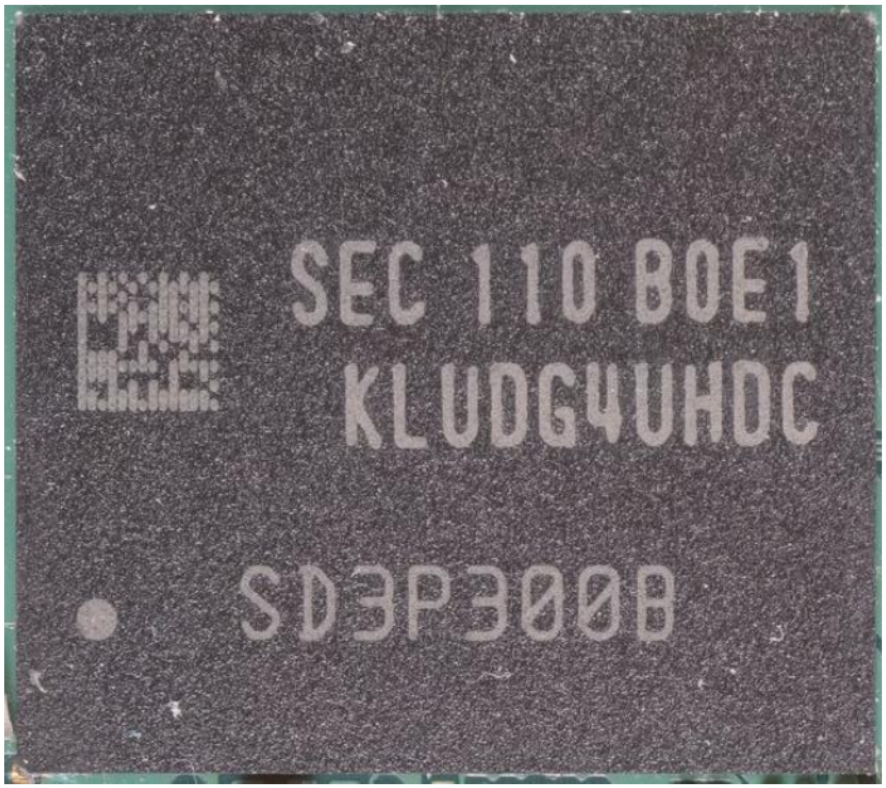
Accused Products

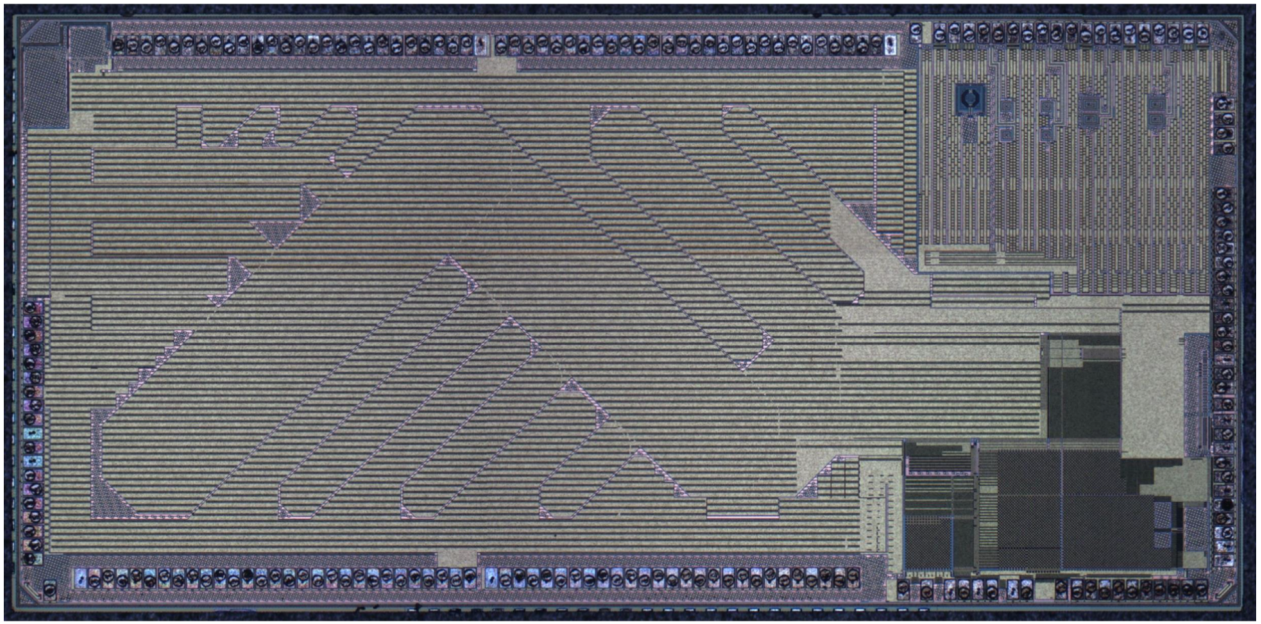
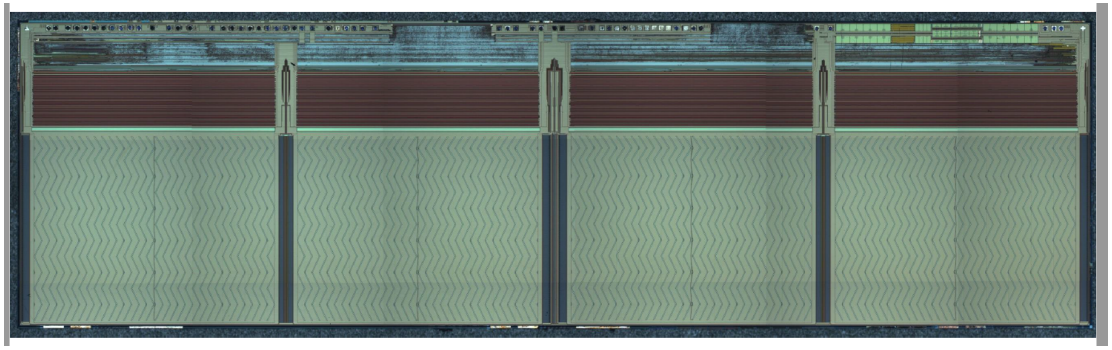
Samsung products with Samsung NAND flash chips, including without limitation the Samsung Galaxy S21 Ultra 5G ("Accused Products"), infringe at least Claims 1-3 and 6-8 of the '241 Patent.

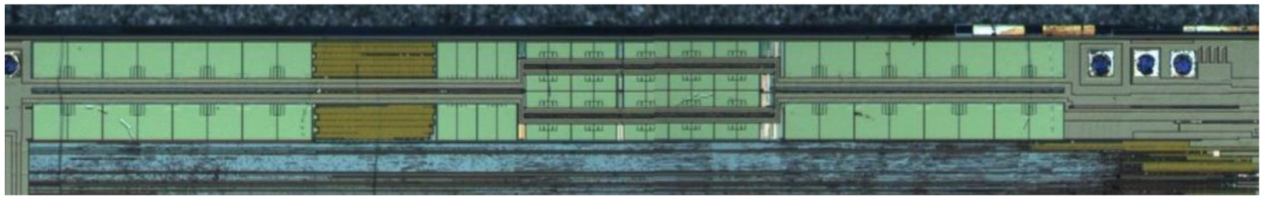
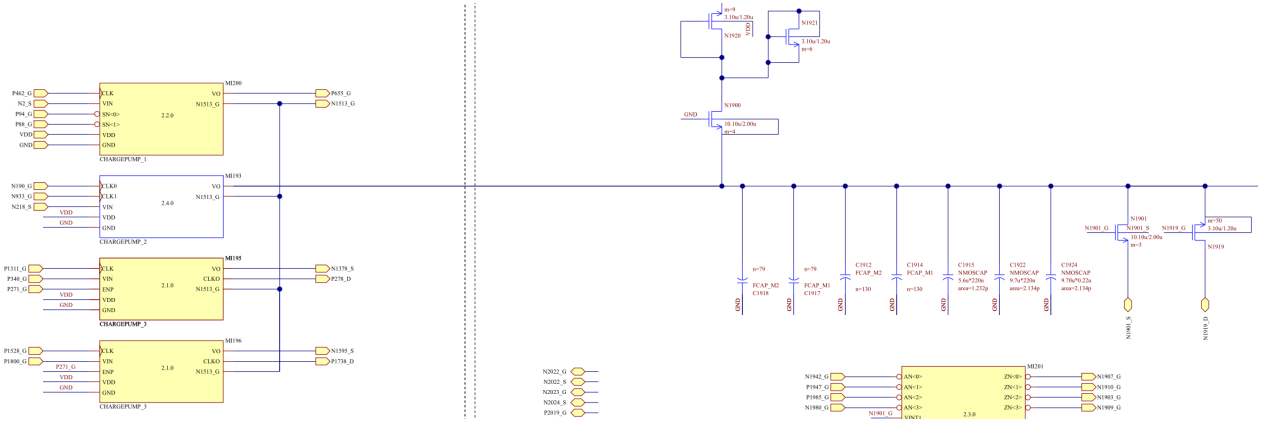
Claim 1

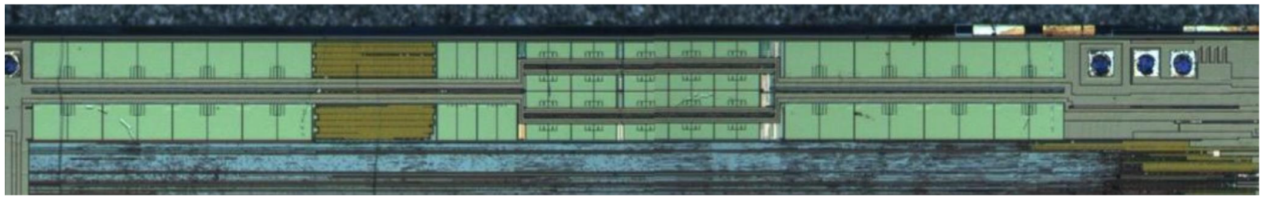
Claim 1	Accused Products
[1pre] 1. A charge pump circuit for generating a charge pump voltage having minimal voltage ripples, comprising:	To the extent the preamble is limiting, each Accused Product includes a charge pump circuit for generating a charge pump voltage having minimal voltage ripples. For example, the Samsung Galaxy S21 Ultra 5G includes the charge pump circuit of the Samsung NAND flash circuit, package marking SEC 110 BOE1 KLUDG4UHDC SD3P300B. *See, e.g.*:

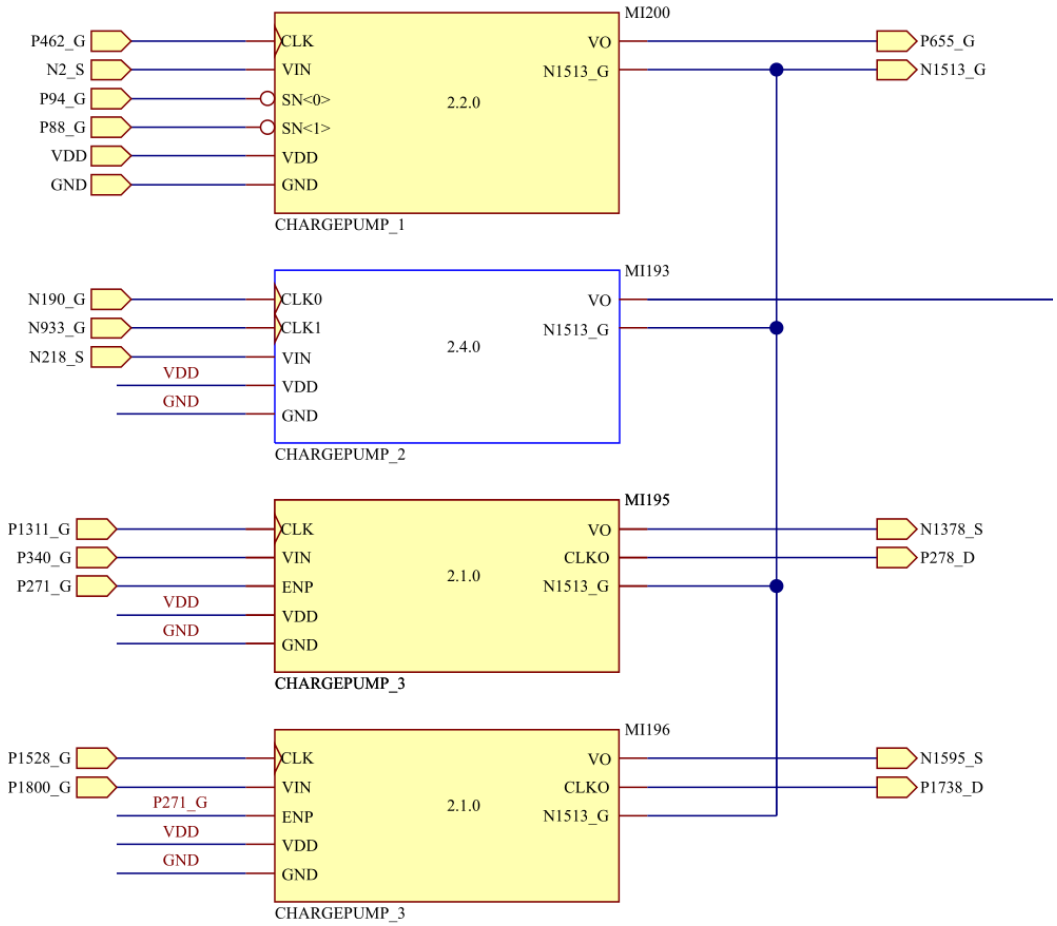
Claim 1	Accused Products
	 Photograph of main system board from Samsung Galaxy S21 Ultra 5G, with NAND circuit indicated

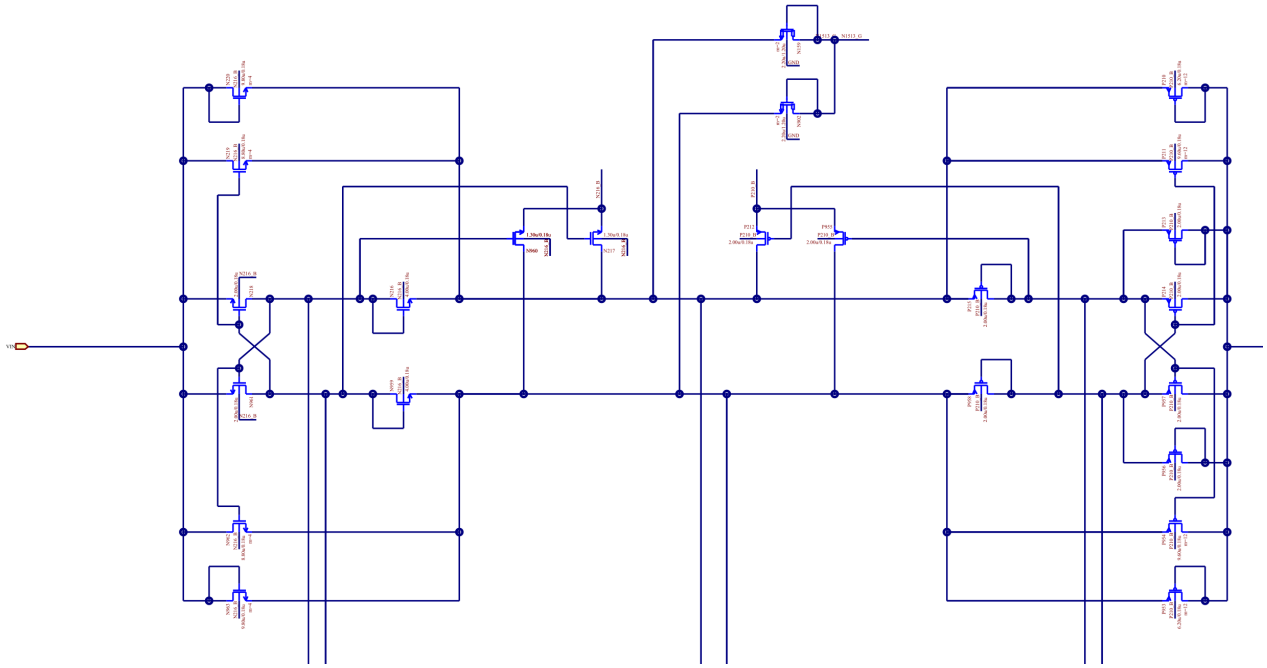
Claim 1	Accused Products
	 Detail photograph of NAND circuit in Samsung Galaxy S21 Ultra 5G

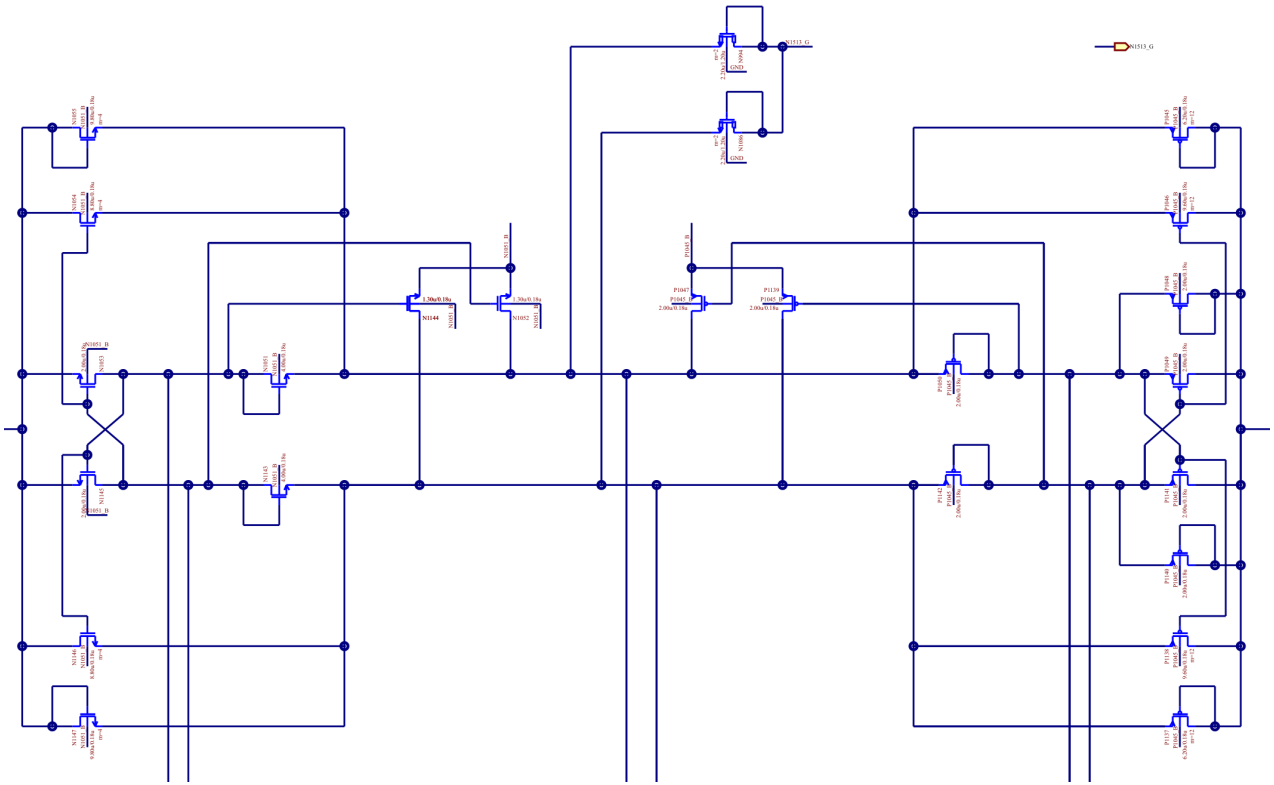
Claim 1	Accused Products
	 Photograph of portion of NAND circuit from Samsung Galaxy S21 Ultra 5G  Photograph of portion of NAND circuit from Samsung Galaxy S21 Ultra 5G

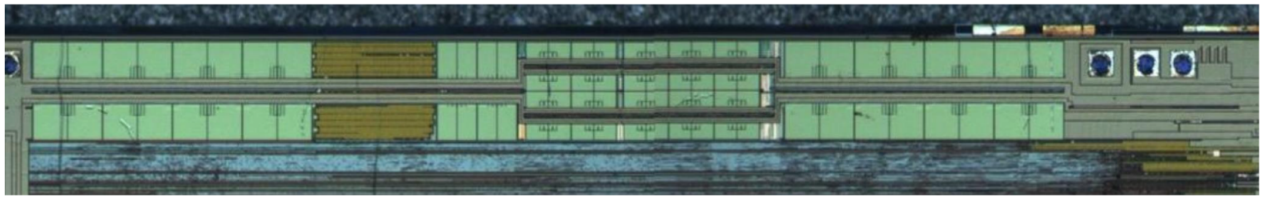
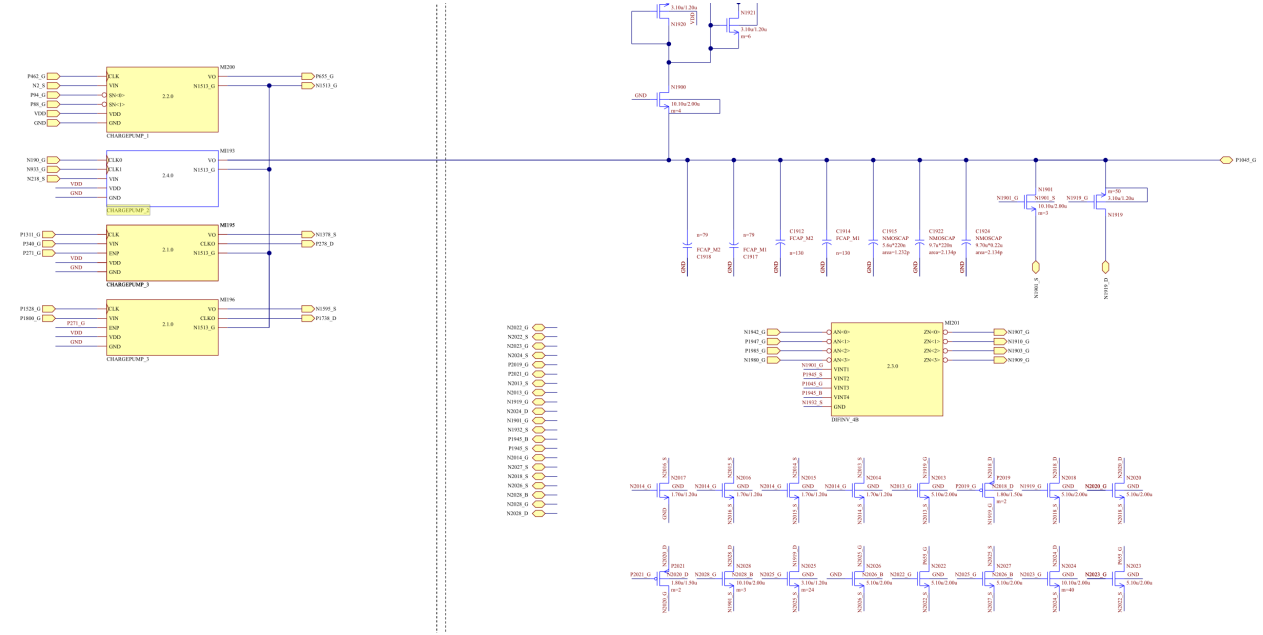
Claim 1	Accused Products
	 Detail photograph of portion of NAND circuit from Samsung Galaxy S21 Ultra 5G  Schematic of NAND charge pump circuit from Samsung Galaxy S21 Ultra 5G
[1a] a pumping circuit comprising one or more stages operable to receive a supply voltage and generate a selected one of a plurality of pump voltages;	Each Accused Product includes a pumping circuit comprising one or more stages operable to receive a supply voltage and generate a selected one of a plurality of pump voltages. For example, the NAND charge pump circuit of the Samsung Galaxy S21 Ultra 5G comprises the pumping circuit shown below. *See, e.g.*:

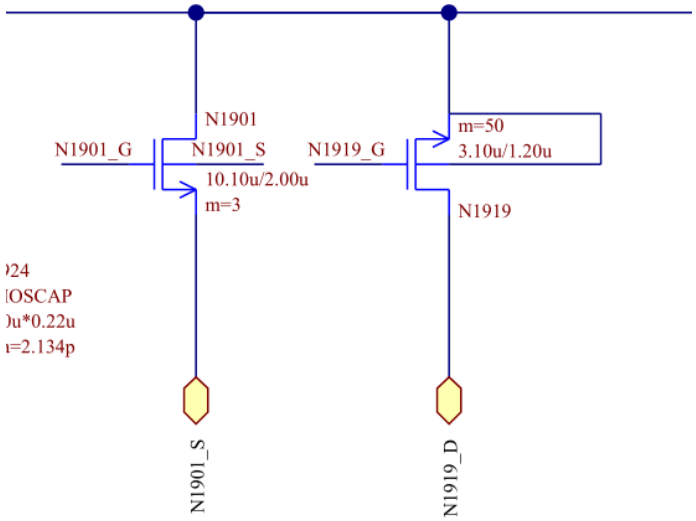
Claim 1	Accused Products
	 Detail photograph of portion of NAND circuit from Samsung Galaxy S21 Ultra 5G

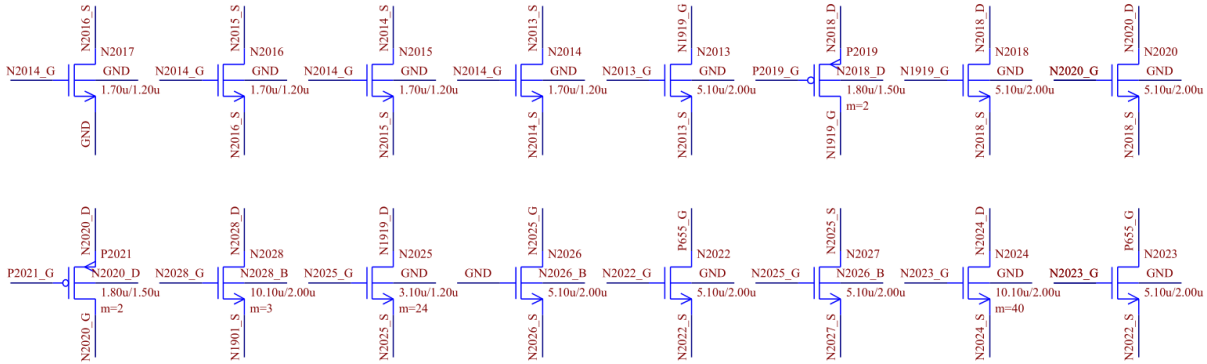
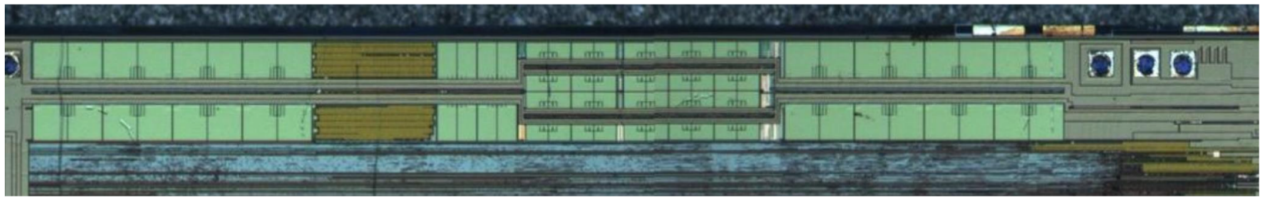
Claim 1	Accused Products
	 Schematic of charge pump circuit from Samsung Galaxy S21 Ultra 5G

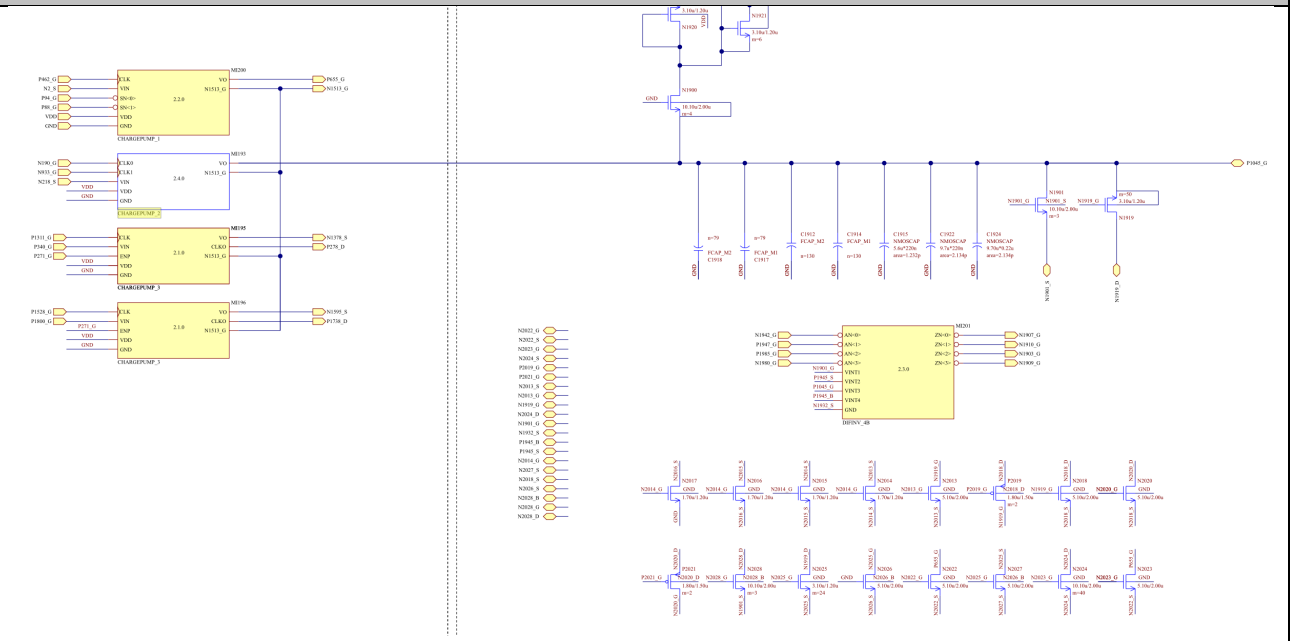
Claim 1	Accused Products
	 Detail schematic of a portion of CHARGEPUMP_2

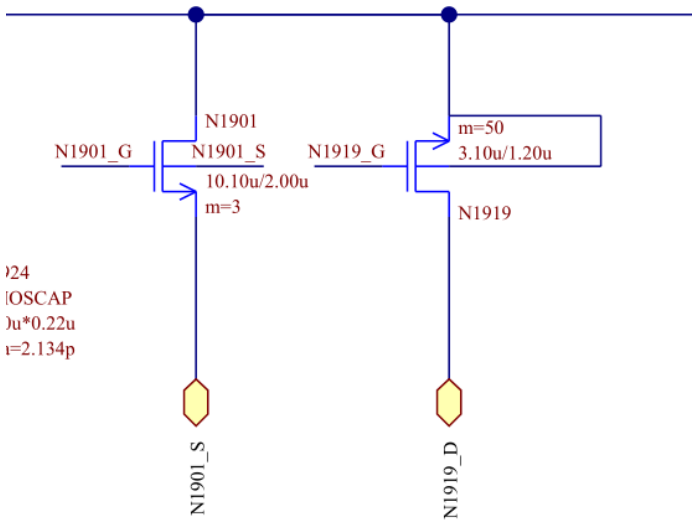
Claim 1	Accused Products
	 Detail schematic of a portion of CHARGEPUMP_2. The wire at far left connects to the wire at the far right of the previous schematic.
[1b] a plurality of loads selectively coupleable to an output of the pumping circuit, each load associated with a specific pump voltage; and	Each Accused Product includes a plurality of loads selectively coupleable to an output of the pumping circuit, each load associated with a specific pump voltage. For example, the output of the pumping circuit is connected to selectable loads as shown below. Due to the different configurations of the selectively coupleable loads, on information and belief each load is associated with a specific pump voltage. *See, e.g.*:

Claim 1	Accused Products
	 Detail photograph of portion of NAND circuit from Samsung Galaxy S21 Ultra 5G  Schematic of charge pump circuit from Samsung Galaxy S21 Ultra 5G

Claim 1	Accused Products
	 Detail from schematic of charge pump circuit from Samsung Galaxy S21 Ultra 5G showing loads selectively coupleable to the output of the pumping circuit

Claim 1	Accused Products
	 Detail from schematic of charge pump circuit from Samsung Galaxy S21 Ultra 5G showing loads selectively coupleable to the output of the pumping circuit
[1c] a load selector means for selectively coupling a load associated with a specific pump voltage to the output of said pumping circuit	Each Accused Product includes a load selector means for selectively coupling a load associated with a specific pump voltage to the output of said pumping circuit. *See, e.g.*:  Detail photograph of portion of NAND circuit from Samsung Galaxy S21 Ultra 5G

Claim 1	Accused Products
	 Schematic of charge pump circuit from Samsung Galaxy S21 Ultra 5G

Claim 1	Accused Products
	 Detail from schematic of charge pump circuit from Samsung Galaxy S21 Ultra 5G showing loads selectively coupleable to the output of the pumping circuit

Claim 2

Claim 2	Accused Products
2. The charge pump circuit of claim 1, wherein the load selector means includes a target output pump selector for shutting down the variable charge pump circuit when the target output pump voltage	To the extent the preamble is limiting, each Accused Product includes the charge pump circuit of claim 1, wherein the load selector means includes a target output pump selector for shutting down the variable charge pump circuit when the target output pump voltage (Vcfra) is greater than or equal to a reference voltage (Vref). *See* evidence and explanation for claim element [1a], *supra*.

Claim 2	Accused Products
(Vcfra) is greater than or equal to a reference voltage (Vref).	

Claim 3

Claim 3	Accused Products
3. The charge pump circuit of claim 2, wherein the load selector means further includes a maximum ripple on the target output selector means for adding a load, whenever a maximum ripple on the target output voltage (Vcfrb) greater than the reference voltage (Vref) then the maximum ripple on the target output selector means adds additional loads until the Vcfrb voltage is less than or equal to the reference voltage (Vref).	To the extent the preamble is limiting, each Accused Product includes the charge pump circuit of claim 2, wherein the load selector means further includes a maximum ripple on the target output selector means for adding a load, and whenever a maximum ripple on the target output voltage (Vcfrb) greater than the reference voltage (Vref) then the maximum ripple on the target output selector means adds additional loads until the Vcfrb voltage is less than or equal to the reference voltage (Vref). *See* evidence and explanation for claim element [1a] and claim 2, *supra*.

Claim 6

Claim 6	Accused Products
6. The charge pump circuit of claim 1, wherein the load selector means is a plurality of switches, one switch for each of said loads, each switch having a first terminal, a	To the extent the preamble is limiting, each Accused Product includes the charge pump circuit of claim 1, wherein the load selector means is a plurality of switches, one switch for each of said loads, each switch having a first terminal, a second terminal, and an enable terminal, the switch being coupled in series with each load, the first terminal of the switch being coupled to the output pump and the second terminal of the switch is coupled to each load.

Claim 6	Accused Products
second terminal, and an enable terminal, the switch being coupled in series with each load, the first terminal of the switch being coupled to the output pump and the second terminal of the switch is coupled to each load.	*See* evidence and explanation for claim element [1c] *supra*.

Claim 7

Claim 7	Accused Products
7. The charge pump circuit of claim 1, wherein each load selector means comprises an NMOS transistor having a gate, a drain and a source, the gate of the NMOS load transistor being coupled to an enable signal, the source of the load NMOS load transistor being coupled to an electrical ground, and the drain being coupled to a load.	To the extent the preamble is limiting, each Accused Product includes the charge pump circuit of claim 1, wherein each load selector means comprises an NMOS transistor having a gate, a drain and a source, the gate of the NMOS load transistor being coupled to an enable signal, the source of the load NMOS load transistor being coupled to an electrical ground, and the drain being coupled to a load. *See* evidence and explanation for claim element [1c] *supra*.

Claim 8

Claim 8	Accused Products
8. The charge pump circuit of claim 7, wherein each load is a capacitor or a current sinker	To the extent the preamble is limiting, each Accused Product includes the charge pump circuit of claim 7, wherein each load is a capacitor or a current sinker having a first terminal and a second

Claim 8	Accused Products
having a first terminal and a second terminal, the first terminal being coupled to the pump voltage and the second terminal being coupled to the drain of the NMOS transistor.	terminal, the first terminal being coupled to the pump voltage and the second terminal being coupled to the drain of the NMOS transistor. *See* evidence and explanation for claim element [1c] *supra*.